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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,778	03/06/2002	Robin Alexis Takasugi	10018457-1	8925

7590 07/19/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

CORRIELUS, JEAN M

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,778

Applicant(s)

TAKASUGI ET AL.

Examiner

Jean M Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the application filed on March 6, 2002, in which claims 1-24 are pending for examination.

Drawings

2. Applicants are required to furnish the formal drawings in response this office action. No new matter may be introduced in the required drawing. Failure to timely submit a drawing will result in **ABANDONMENT** of the application. (See attachment for PTO-948).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siegel US Patent no. 5,261,072.

As to claim 1, Siegel discloses the claimed “receiving from the host device a command to transfer data between the host device and the storage medium” an implemented software used to execute a software call from a supervisory program operating in the host computer to transfer data (Abstract; col.3, lines 48-64); “storing in a first register a value for tracking a number of data units that have been transferred into a buffer but that have not yet been transferred out the buffer” (since register in general used to hold data for a particular purpose so the memory cache as disclosed by Siegel has the register that allow to hold the amount of data to be transferred (col.3, line 66-col.4, line 9; col.6, lines 38-67). Siegel does not discloses the use of modifying a value contained in the first register in response to a transfer of a data unit into the buffer and a value contained in the register in response to a transfer of a data unit out of the buffer. However, Siegel discloses the use of incrementing the next address corresponding to the data area in the cache memory in which the next block of data is to be stored (col.7, lines 31-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement Siegel’s system by modifying the value contained in the register. Such an implementation would allow Siegel’s system the enhanced capability of eliminating the breaks in presenting data to the host computer caused by delays associated with locating a particular data block.

As to claim 2, Siegel discloses the claimed “storing a second register a value for incrementing a value contained in the first register” (col.6, lines 38-67; col.7, lines 43-

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66); and incrementing a value contained in the first register by the value contained in the second register” (col.7, lines 43-66)

As to claim 3, Siegel discloses the claimed “storing a third register a value for decrementing a value contained in the first register” (col.7, lines 8-40); and decrementing a value contained in the first register by the value contained in the third register” (col.7, lines 8-40).

As to claim 4, Siegel discloses the claimed “storing in a fourth register an address representing a location in the buffer where data is being transferred between the buffer and the host device” (col.8, lines 1-67); and “storing in a fifth register an address representing a location in the buffer where data is being transferred between the buffer and storage medium” (col.8, 1-67).

As to claim 5, Siegel discloses the claimed “storing in a sixth register an address representing a beginning of the buffer” (col.8, lines 1-67)); and “storing in a seventh register an address representing and end of the buffer” (col.8, lines 1-67).

As to claim 6, Siegel discloses the claimed “storing in an eighth register a value representing a storage capacity of the buffer” (col.8, lines 1-67).

As to claim 7, Siegel discloses the claimed “wherein the host device is a computer” (col.4, lines 37-50).

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As to claim 8, Siegel discloses the claimed "wherein the storage medium comprises non-volatile semiconductor memory" (col.6, lines 15-62).

As to claim 9, Siegel discloses the claimed "implementing the method via an application specific integrated circuit (ASIC) (col.4, lines 1-9; col.7, lines 50-66).

As to claims 10-24:

The limitations of claims 10-24 have been noted in the rejection of claims 1-9 above.

They are, therefore, rejected under the same rationale.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean M. Corrielus whose telephone number is (703) 306-3035. The examiner can normally be reached on Monday - Friday (12:00pm - 7:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean M. Corrielus

Patent Examiner

July 10, 2004